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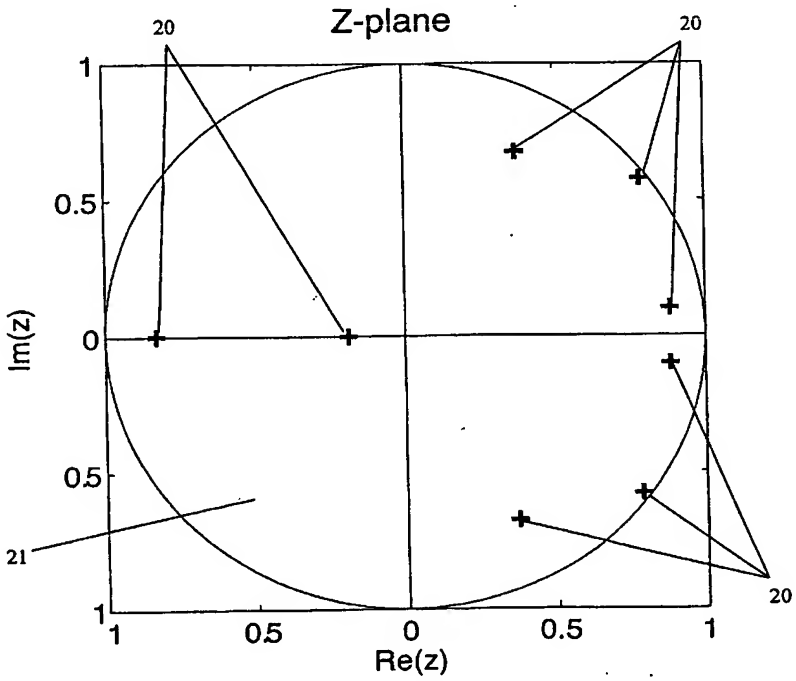
[Continued on next page]

(54) Title: METHOD OF MONITORING BRAIN FUNCTION



8 poles resulting from the 8th order AR & 5th order MA modelling for a single segment of recorded EEG

(57) Abstract: A method for assessing brain state by analysing mammalian brain electoencephalogram ("EEG") recordings using an eighth order autoregressive and fifth order moving average discrete time equation.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/000045

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. [7]: A61B 5/0476

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
SEE ELECTRONIC DATABASES CONSULTED

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
DWPI JAPIO MEDLINE INTERNET: eeg electroenceph brain function activity arma ma ar auto regress discrete time moving average z transform domain plane signal process digital filter analyz assess measure model alter vigilance sleep anaesthetic surgery dsp difference

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	SCHACK B et al (1995)*. Dynamic Power and Coherence Analysis of Ultra Short-Term Cognitive Processes - A Methodical Study. Brain Topography, 8(2), p:127-136. Pages 129-131	1-26 2-22, 25-26
X Y	SCHACK B et al (1995). Methods of dynamic spectral analysis by self-exciting autoregressive moving average models and their application to analysing biosignals. Medical & Biological Engineering & Computing, 33, p:492-498 Pages 493 and 496	1-26 2-22, 25-26
X X,Y	TSENG et al (1995). Evaluation of parametric methods in EEG signal analysis. Medical, Engineering, Physics, 17, p:71-78. Pages 72 to 73, pages 75 to 77 (Inventive Step)	1, 23, 24 2-22, 25-26

[X] Further documents are listed in the continuation of Box C [X] See patent family annex

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
18 March 2004	24 MAR 2004
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer MATTHEW FORWARD Telephone No : (02) 6283 2606

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	BISHOP (2002), The Mechatronics Handbook; CRC Press, Chapter 25, section 25.1 System and Signal Analysis. See section 25.1	2-22, 25-26
Y	BRUCE (2001), Biomedical Signal Processing and Signal Modeling, John Wiley & Sons, Inc. Referred to in "Modeling Stochastic Signals as Filtered White Noise", Retrieved from Internet: < bsp.csie.edu.tw/courses/bsp/slide/bsp10.ppt> Entire document	2-22, 25-26
A	US 5010891 A (CHAMOUN) 30 April 1991 Column 11 line 32 to column 16 line 15	
A	US 5083571 A (PRICHEP) 28 January 1992 Column 3 line 1 to column 4 line 48, column 7 line 48 to column 8 line 30	
A	US 5797853 A (MUSHA et al) 25 August 1998 Figures 3 and 5	
A	US 6067467 A (JOHN) 23 May 2000 Abstract	
A	DENG (2002), Digital Signal Processing. Retrieved from Internet: <www.ee.latrode.edu.au/~dennis/teaching/ELE32DSP/l.pdf> Pages 45 to 52	
P, A	US 6549804 B1 (OSORIO et al) 15 April 2003 Claims	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/AU2004/000045

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
US	5010891	AU	54100/90	CA	2051683	EP	468999
		US	4907597	WO	90/11718		
US	5083571	NO	FAMILY				
US	5797853	JP	07-265275				
US	6067467	US	5699808				
US	6549804	AU	17528/97	EP	898460	US	5995868
		WO	97/26823				

END OF ANNEX